On regularization strategy for the axisymmetric backward heat equation with non-zero right hand side

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Abstract of the talk

In this talk, we consider the time-inverse problem for the axisymmetric heat equation with a non-zero right-hand side. This problem is ill-posed: the solution (if it exists) does not depend continuously on the final data. We use a modified quasi-boundary value to regularize the inhomogeneous problem. We also present some additional efficient regularization strategies which can be potentially applied to this problem. In the end, numerical results are presented to illustrate the accuracy and efficiency of the method.

(*) This work is based on a joint work with Ngo Van Hoa.

References

[1] Tra Quoc Khanh, Ngo Van Hoa, *On the axisymmetric backward heat equation with non-zero right hand side: Regularization and error estimates* , Journal of Computational and Applied Mathematics, Volume 335, June 2018, Pages 156-167.